CLAIMS

1. An electrical interconnect comprising:

a substrate having an insulating surface;

a first electrically-conductive line on the insulating surface of the substrate;

a second electrically-conductive line on the insulating surface of the substrate; and

an electrically-conductive cut-link pad on the insulating surface of the substrate, the cut-link pad conductively bonded between the first conductive line and the second conductive line, the cut-link pad also having substantially less thermal resistance per unit length than each of the first and second lines.

2. The interconnect of Claim 1, wherein the electrically-conductive cut-link pad lies in the same plane as the first and second electrically-conductive lines.

3. The interconnect of Claim 1, wherein the electrically-conductive cut-link pad has an inner surface facing the substrate and an opposing outer surface facing away from the substrate, the first and second electrically-conductive lines extending from the inner surface into the substrate.

4. The interconnect of Claim 1, wherein the electrically-conductive cut-link pad has an inner surface facing the substrate, the first electrically-conductive line extending from the inner surface into the substrate, the second electrically-conductive line lying in the same plane as the cut-link pad.

5. The interconnect of Claim 1, wherein the width of the cut-link pad is at least ten percent greater than the

width of each of the first and second electrically-conductive lines.

6. The interconnect of Claim 1, wherein the width of the cut-link pad is at least twenty-five percent greater than the width of each of the first and second electrically-conductive lines.

7. The interconnect of Claim 1, wherein the width of the cut-link pad is at least fifty percent greater than the width of each of the first and second electrically-conductive lines.

8. The interconnect of Claim 7, wherein the cut-link pad is comprised of a composition substantially identical to the composition of the first and second electrically-conductive lines.

9. The interconnect of Claim 8, wherein the substrate is planar and the width of the cut-link pad is within 20% of the length of the cut-link pad, the length being measured as the distance across the cut-link pad between the first and second lines.

10. The interconnect of Claim 1, wherein the cut-link pad is comprised of a material with greater thermal conductivity than the material comprising each of the first and second electrically-conductive lines.

11. The interconnect of Claim 1, wherein the substrate includes a silicon oxide.

12. The interconnect of Claim 1, further comprising a passivative layer covering the cut-link pad.

13. The interconnect of Claim 12, wherein the passivative layer is harder than the substrate.

14. The interconnect of Claim 13, wherein the passivative layer is comprised of silicon nitride.

15. The interconnect of Claim 12, wherein the electrically-conductive cut-link pad lies in the same plane as the first and second electrically-conductive lines.

16. The interconnect of Claim 12, wherein the electrically-conductive cut-link pad has an inner surface facing the substrate and an opposing outer surface facing away from the substrate, the first and second electrically-conductive lines extending from the inner surface into the substrate.

17. The interconnect of Claim 12, wherein the width of the cut-link pad is at least fifty percent greater than the width of each of the first and second electrically-conductive lines.

18. The interconnect of Claim 17, wherein the substrate is planar and the width of the cut-link pad is within 20% of the length of the cut-link pad, the length being measured as the distance across the cut-link pad between the first and second lines.

19. The interconnect of Claim 12, wherein the cut-link pad is comprised of a material with greater thermal conductivity than the material comprising each of the first and second electrically-conductive lines.

20. A method for cutting a link between interconnected circuits comprising the following steps:

directing a laser upon an electrically-conductive cut-link pad conductively bonded between a first electrically-conductive line and a second electrically-conductive line on a substrate, the cut-link pad having substantially less thermal resistance per unit length than each of the first and second lines; and

maintaining the laser upon the cut-link pad until the laser infuses sufficient energy into the cut-link pad to break the conductive link across the cut-link pad between the pair of electrically-conductive lines.

21. The method of Claim 20, wherein the electrically-conductive cut-link pad lies in the same plane as the first and second electrically-conductive lines.

22. The method of Claim 20, wherein the electrically-conductive cut-link pad has an inner surface facing the substrate and an opposing outer surface facing away from the substrate, the first and second electrically-conductive lines extending from the inner surface into the substrate.

23. The method of Claim 22, wherein the laser beam extends across the entirety of the cut-link pad when the laser is directed upon the cut-link pad.

24. The method of Claim 20, wherein the electrically-conductive cut-link pad has an inner surface facing the substrate, the first electrically-conductive line extending from the inner surface into the substrate, the second electrically-conductive line lying in the same plane as the cut-link pad.

25. The method of Claim 20, wherein the width of the cut-link pad is at least ten percent greater than the width of each of the first and second electrically-conductive lines.

26. The method of Claim 20, wherein the width of the cut-link pad is at least twenty-five percent greater than the width of each of the first and second electrically-conductive lines.

27. The method of Claim 20, wherein the width of the cut-link pad is at least fifty percent greater than the width of each of the first and second electrically-conductive lines.

28. The method of Claim 27, wherein the cut-link pad is comprised of a composition substantially identical to the composition of the first and second electrically-conductive lines.

29. The method of Claim 28, wherein the substrate is planar and the width of the cut-link pad is within 20% of the length of the cut-link pad.

30. The method of Claim 29, wherein the laser beam extends across the entirety of the cut-link pad when the laser is directed upon the cut-link pad.

31. The method of Claim 20, wherein the material comprising the cut-link pad has greater thermal conductivity than the material comprising each of the first and second electrically-conductive lines.

32. The method of Claim 20, wherein the substrate includes a silicon oxide.

33. The method of Claim 20, further comprising a passivative layer covering the cut-link pad.

34. The method of Claim 33, wherein the passivative layer is harder than the substrate.

35. The method of Claim 34, wherein the passivative layer is comprised of silicon nitride.

36. The method of Claim 33, wherein the electrically-conductive cut-link pad lies in the same plane as the first and second electrically-conductive lines.

37. The method of Claim 33, wherein the electrically-conductive cut-link pad has an inner surface facing the substrate and an opposing outer surface facing away from the substrate, the first and second electrically-conductive lines extending from the inner surface into the substrate.

38. The method of Claim 37, wherein the laser beam extends across the entirety of the cut-link pad when the laser is directed upon the cut-link pad.

39. The method of Claim 33, wherein the width of the cut-link pad is at least fifty percent greater than the width of each of the first and second electrically-conductive lines.

40. The method of Claim 39, wherein the substrate is planar and the width of the cut-link pad is within 20% of the length of the cut-link pad, the length being measured as the distance across the cut-link pad between the first and second lines.

21 ~~41~~. The method of Claim 13 ~~33~~, wherein the cut-link pad is comprised of a material with greater thermal conductivity than the material comprising each of the first and second electrically-conductive lines.

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